

Abstract

An improved apparatus and method for capturing and analyzing the end-tidal portion of an exhalation. The CO₂ level of air drawn into the system (10) is monitored to distinguish inhalation and exhalation of
5 breath. Upon detection of a decrease in the CO₂ level in the air drawn into the system (10), indicating a transition between exhalation and inhalation a pair of flow selector valves (26, 28) are operated to capture the end-tidal volume of air drawn into the system (10) immediately prior to the detection of the decrease in the CO₂ level. Incoming air is diverted
10 around the captured volume of air, and the CO₂ levels are continually monitored to ensure that the captured volume of air corresponds to the end-tidal portion of an exhalation. Once the captured volume of air is positively identified as the end-tidal portion of an exhalation, the captured volume is routed through a gas analyzer (44) for analysis of
15 one or more predetermined gas levels.